

**NATURAL RESOURCES CONSERVATION SERVICE  
CONSERVATION PRACTICE STANDARD**

**SOIL SALINITY MANAGEMENT - NONIRRIGATED**

(acre)

CODE 571

**DEFINITION**

Management of land, water, and plants to control harmful accumulations of salts on the soil surface or in the root zone on nonirrigated areas.

**SCOPE**

This standard establishes the minimum acceptable requirements for the planning, design, operation, and maintenance of interrelated practices used to remedy and control the formation of saline or sodic areas. It does not apply to saline or sodic conditions related to or induced by irrigation.

**PURPOSE**

Treatment of saline or sodic-affected areas on nonirrigated land to permit desired plant growth and protect surface and ground water resources.

**CONDITIONS WHERE PRACTICE APPLIES**

This practice applies to all nonirrigated land where (a) human-induced soil salinity or sodicity is at or approaching a level that adversely affects land use, or (b) combinations of factors - topography, soils, geology, precipitation, and land use - indicate the future probability of such adverse effects.

**PLANNING CONSIDERATIONS**

***Water Quantity***

1. Effects on the water budget, especially on volumes and rates of runoff, infiltration, evaporation, transpiration, deep percolation, and ground water recharge.

***Water Quality***

1. Potential for transfer of salinity conditions to another location where surface or subsurface drains are used.
2. Effects of erosion and the movement of sediment, pathogens, and soluble and sediment-attached substances, including salts, that could be carried by runoff.

**INVESTIGATIONS**

1. Test the soil water extract of the soil surface and potential root zone to determine the presence and concentration of saline or sodic substances. Refer to National Engineering Handbook, Section 16, Chapter 4, for guidance on how electrical conductivity levels affect potential yields.
2. Map the affected area.
3. Determine the relationship of the ground surface topography and the water table contours in and adjacent to the problem area. One suggested method involves installing nine (three rows of three) auger hole observation wells for water table measurements. Additional wells may be needed to adequately define the recharge area.

**PLANNING AND DESIGN**

1. Correct the salinity problem by applying the practice(s) as part of an overall resource management system (RMS).

<p>Conservation practice standards are reviewed periodically, and updated if needed. To obtain the current version of this standard, contact the Natural Resources Conservation Service.</p>
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2. Planned actions should give first consideration to prevention rather than correction.
3. To the maximum extent practical, use vegetation to utilize soil water in the recharge areas.
4. When subsurface drains are needed, the configuration selected will give priority consideration to placing interceptor drains close to the recharge area to maximize the benefited area and provide a drain effluent of the best possible water quality.
5. Where applicable, improve surface drainage in the recharge area.
6. Corrective measures must comply with water quality laws and regulation.

Monitoring of before and after conditions may be recommended.

### **SPECIFICATIONS GUIDE**

1. List plants and provide management details on the plants adapted for use in recharge and affected area. Consider factors such as water usage, salt tolerance, and erosion control characteristics.
2. Incorporate, by reference, appropriate conservation practices that constitute components of the treatment of recharge and affected areas.
3. List the types and extent of environmental and ecological monitoring and evaluation that may be necessary.